

April 15, 2003

TO: Internal File

THRU: Daron R. Haddock, Permit Supervisor

FROM: Gregg A. Galecki, Reclamation Specialist

RE: 2002 Fourth Quarter Water Monitoring, Canyon Fuel Company, LLC, Dugout Mine, C/007/039-WQ02-4

1. Was data submitted for all of the MRP required sites? YES ☒ NO ☐

Identify sites not monitored and reason why, if known:

2. On what date does the MRP require a five-year resampling of baseline water data.

See Technical Directive 004 for baseline resampling requirements. Consider the five-year baseline resubmittal when responding to question one above. Indicate if the MRP does not have such a requirement.

Resampling due date

Low-flow 2002 (third quarter). Baseline sampling was conducted at the required sites during the 3rd quarter.

3. Were all required parameters reported for each site? YES X NO

Comments, including identity of monitoring site:

Due to low snowpack conditions (<70%) as measured on March 1, a special hydrograph monitoring program was initiated in the 2nd quarter, as outlined in the MRP. The special sampling program included both high-flow and low-flow water quality analysis of selected streams and springs, in conjunction with weekly flow-only monitoring of the sites. This information was submitted during the current review period. A total of 14 sites were monitored with peak flows ranging from approximately 1 gpm to 35 gpm and apparent base flows ranging from approximately 0.25 gpm to 12 gpm, respectively. The attached graphs illustrate the peak flows were observed in late April 2002, and quickly dropped to consistent baseline flows. Any peaks observed are likely related to meteoric flow.

4. Were irregularities found in the data?

YES X NO

Comments, including identity of monitoring site:

Of 13 total samples sites sent to the lab, eleven (11) sites had ionic balances less than 5 percent. This is a significantly better performance from the lab than the second quarter, where 12 of 13 samples collected were out of range (greater than 5 percent).

Another irregularity noted was elevated Specific Conductivity values. Of seven samples showing increases ranging from approximately 30 percent to 90 percent (MD-1) last month, two continued to rise (MD-1, SC-116), three leveled at the high value (Springs 203, 260, SP-20), and two showed a decrease (SC-65, PC-1A). With the exception of MD-1, which had increased levels of TDS and Dissolved Iron, all the sites showed no increase in TDS, Sulfate or any other parameters that would account for the increased Specific Conductivity values. This will continue to be monitored in the future.

Water quality at site MD-1 continued to change from the 3rd quarter. However, it is believed that the change is directly related to the de-watering of old mine workings that was conducted in August 2002. MD-1 was sampled on August 8, and was dry by the end of the month. This coincided with the de-watering of old mine-workings, which was completed by the end of the month. It was sampled on October 10, 2002 for the 4th quarter, and values continued to increase. Specific Conductivity (2520 umhos), Dissolved Iron (7.88 mg/l) and Dissolved Sodium (73.4 mg/l) all continued to increase. However, sulfate was low (330 mg/l) and TDS had decreased slightly.

At DC-1, parameters that were abnormally high during 1st and 3rd quarter sampling have returned to closer to normal parameters. The quality at this site will continue to be monitored.

5. Were DMR forms submitted for all required sites?

1 st month,	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
2 nd month,	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
3 rd month,	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

6. Were all required DMR parameters reported?

YES ☒ NO ☐

Comments, including identity of monitoring site:

7. Were irregularities found in the DMR data?

YES ☐

NO ☒

Comments, including identity of monitoring site:

UPDES Discharge Point 002 (Sed. Pond Q) discharge was sampled October 31, 2002. With a flow of 125 gpm and TDS value of 910 mg/l, the 1,367 lbs./day discharge was below the 1-ton per day limit. No exceedances were observed. No other discharges were reported for the quarter.

8. Based on your review, what further actions, if any, do you recommend?

No additional information is required for the 02-4 (4th) quarter.